

### **REMARKS**

Claims 1-3 and 5-23 are pending in the present application. Claims 1-3, 5-7, 10, 12 and 15 have been amended. Claims 16-23 have been presented herewith. Claim 4 has been canceled.

### **Priority Under 35 U.S.C. 119**

Applicant notes the Examiner's acknowledgment of the Claim for Priority under 35 U.S.C. 119, and receipt of the certified copy of the Priority Document.

### **Drawings**

Applicant notes the Examiner's acceptance of the drawings as filed along with the present application on July 16, 2003.

### **Information Disclosure Statement**

Enclosed are copies of an Information Disclosure Statement and Form PTO-1449 filed along with the present application on July 16, 2003. Also enclosed is a copy of a dated, stamped postcard receipt provided as evidence that the Information Disclosure Statement dated July 16, 2003, was received by the U.S. Patent Office. **The Examiner is respectfully requested to acknowledge receipt of the Information Disclosure Statement filed on July 16, 2003, and to confirm that the documents submitted therewith have been considered and will be cited of record in the**

**present application.**

**Claim Rejections-35 U.S.C. 102**

Claims 1, 2, 8 and 11-13 have been rejected under 35 U.S.C. 102(e) as being anticipated by the Yang et al. reference (U.S. Patent No. 6,706,638). This rejection, insofar as it may pertain to the presently pending claims, is traversed for the following reasons.

Claim 5 has been amended to be in independent form as including the features of base claim 1. Claim 5 thus features in combination "said implanting dopant atoms is performed so that said dopant atoms are implanted into said second layer inside a specific area and are not implanted into said second layer outside said specific area, and said forming one or more first openings is performed so that at least one of said first openings is formed in said third layer inside said specific area and others of said first openings are formed in said third layer outside said specific area".

The Examiner has interpreted undoped oxide layer 34 in Figs. 3A – 3B of the Yang et al. reference as a second layer of the claims, photoresist 36 as the third layer, ion implantation step 41 as the implanting dopant atoms, and openings 38 as the first openings in the third layer.

Applicant respectfully submits that the Yang et al. reference as relied upon by the Examiner does not disclose the above noted features of claim 5. That is, areas 40 and corresponding openings 38 in photoresist 36 in Fig. 3B of the Yang et al. reference

must be considered as inside the specific area of claim 5, because areas 40 in oxide layer 34 under openings 38 are implanted with dopant 41. Since each of openings 38 (interpreted by the Examiner as the first openings in the third layer) are thus formed in the specific area, the process of the Yang et al. reference as relied upon by the Examiner does not include forming one or more first openings such that "others of said first openings are formed in said third layer outside said specific area", whereby such area outside the specific area does not include implanted dopant atoms in the second layer. Applicant therefore respectfully submits that the method of fabricating a semiconductor device of claim 5 distinguishes over the Yang et al. reference as relied upon by the Examiner, and that this rejection, insofar as it may pertain to claim 5, is improper for at least these reasons.

Claim 6 has been amended to be in independent form as including the features of base claim 1. Claim 6 thus features in combination "said implanting dopant atoms is performed so that said dopant atoms include first dopant atoms and second dopant atoms different from said first dopant atoms, said first dopant atoms are implanted into said second layer inside a specific area, and said second dopant atoms are implanted into said second layer outside said specific area".

Applicant respectfully submits that the Yang et al. reference as relied upon by the Examiner does not disclose the above noted features of claim 6. That is, as noted above, the Examiner has interpreted ion implantation step 41 as described beginning in column 3, line 65 of the Yang et al. reference as the implanting dopant atoms of the

claims. However, the ion implantation step 41 as described with respect to Fig. 3B of the Yang et al. reference does not include implanting first dopant atoms into a specific area and implanting different second dopant atoms into a corresponding area outside the specific area, as featured in claim 6. Applicant therefore respectfully submits that the method of fabricating a semiconductor device of claim 6 distinguishes over the Yang et al. reference as relied upon by the Examiner, and that this rejection, insofar as it may pertain to claim 6, is improper for at least these reasons.

Claims 1-3, 8, 9, 11 and 12 have been rejected under 35 U.S.C. 102(b) as being anticipated by the Chen et al. reference (U.S. Patent No. 6,025,273). This rejection, insofar as it may pertain to the presently pending claims, is traversed for the following reasons.

The Examiner has interpreted polysilicon layer 16 in Figs. 2-3 of the Chen et al. reference as the second layer of the claims, implantation of carbon ions into polysilicon layer 16 as the implanting dopant atoms, photoresist layer 18 as the third layer, and the corresponding openings in photoresist layer 18 as the first openings in the third layer.

Applicant respectfully submits that the Yang et al. reference as relied upon by the Examiner does not disclose the features of claim 5 as noted previously. That is, since the carbon ions are implanted into the entirety of polysilicon layer 16 as shown in Fig. 2 of the Chen et al. reference, the Chen et al. reference does not disclose implanting dopant atoms into the second layer so that "said dopant atoms are implanted into said second layer inside a specific area and are not implanted into said second

layer outside said specific area". There is no corresponding area of polysilicon layer 16 of the Chen et al. reference as illustrated in Fig. 2 that would be outside the specific area, and thus consequently not having carbon ions implanted therein. Applicant therefore respectfully submits that the method of fabricating a semiconductor device of claim 5 distinguishes over the Chen et al. reference as relied upon by the Examiner, and that this rejection, insofar as it may pertain to claim 5, is improper for at least these reasons.

Regarding claim 6, as noted above the Examiner has interpreted implantation of carbon ions into polysilicon layer 16 as shown in Fig. 2 of the Chen et al. reference as the implanting dopant atoms of the claims. However, this particular implantation of carbon ions is not described wherein first dopant atoms are implanted into a specific area of polysilicon layer 16 and different second dopant atoms are implanted into a corresponding area outside the specific area of polysilicon layer 16, as would be necessary to meet the features of claim 6. That is, the entirety of polysilicon layer 16 in Fig. 2 of the Chen et al. reference is implanted with a single type (carbon) ion. Applicant therefore respectfully submits that the method of fabricating a semiconductor device of claim 6 distinguishes over the Chen et al. reference as relied upon by the Examiner, and that this rejection, insofar as it may pertain to claim 6, is improper for at least these reasons.

### **Allowable Subject Matter**

Applicant respectfully notes the Examiner's acknowledgment that claims 4-7, 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Although Applicant does not necessarily concede that the above noted rejections are proper, claim 1 has been amended to include the features of dependent claim 4 in view of the acknowledgment of allowable subject matter. Accordingly, the Examiner is respectfully requested to acknowledge that claims 1-3, 7-13 and 15 are allowed.

### **Claims 16-23**

Applicant respectfully submits that claims 16-23, as dependent upon claim 6, distinguish over and would not have been obvious in view of the relied upon prior art as relied upon by the Examiner, at least by virtue of dependency upon claim 6, and by further reason of the features therein.

### **Conclusion**

The Examiner is respectfully requested to reconsider and withdraw the corresponding rejections, and to pass the claims of the present application to issue, for at least the above reasons.

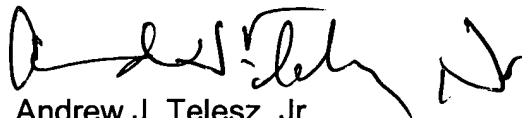
In the event that there are any outstanding matters remaining in the present application, please contact Andrew J. Telesz, Jr. (Reg. No. 33,581) at (571) 283-0720

in the Washington, D.C. area, to discuss these matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment for any additional fees that may be required, or credit any overpayment, to Deposit Account No. 50-0238.

Respectfully submitted,

VOLENTINE FRANCOS & WHITT, P.L.L.C.

A handwritten signature in black ink, appearing to read 'Andrew J. Telesz, Jr.', followed by a small, stylized mark.

Andrew J. Telesz, Jr.  
Registration No. 33,581

One Freedom Square  
11951 Freedom Drive, Suite 1260  
Reston, Virginia 20190  
Telephone No.: (571) 283-0270  
Facsimile No.: (571) 283-0740

Enclosures: - Copies of Information Disclosure Statement and PTO-1449 Form filed  
July 16, 2003  
- Copy of dated, stamped postcard receipt